SCHEDULE-B

***Name of the Work*:Tender for the work of providing and Laying 300mm dia RCC Np3 class sewer line at KariyanapalyaThippanna layout Lingarajapura surrounding areas coming under Lingarajapura service station of AEE E22 sub dvn.**

Sl. No	Particulars	Unit	Total quantity	
1	Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 m3 in volume and stock piling at designated locations and disposal of dismantled materials and stacking serviceable and unserviceable materials separately (pwdvol 3 2023-24 P. No.12, Sl.No. 2.19)	m^3	211.63	
1a	Dismantling of Flexible pavements and disposal of dismantled materials and stacking serviceable and unserviceable materials separately, By Mechanical Means Bituminous course (BWSSB SR 2023-24 Vol-3, P. No.-11, I.No.2.18)	m^3	16.36	
2	Earth work excavation for pipeline trenches in all kinds of soils by mechanical means above 600 mm trench width as per drawing and technical specifications, including setting out, construction of shoring, strutting, barricading, caution lights, bracing, using sight rails & boning rods at every 100 mm wherever necessary as directed, removal of stumps and other deleterious matter, dressing of sides and levelling the bottom of trench to the extent required , utilising the available excavated earth locally for the work etc., and all other appurtenances complete in the following strata. (CSR 23-24 Vol - I, Sl.No: 1.17, Pg.No.10) All kinds of soil depth upto 1.5m ,300mm dia RCC Np3.	m^3	481.76	
2a.	Depth exceeding 1.5 m, but not exceeding 3 m	m^3	78.25	
3	Earth work excavation for pipeline trenches by mechanical means above 600 mm trench width as per drawing and technical specification, including setting out, construction of shoring, strutting, cost of blastingmaterials,barricading, caution lights, bracing, using sight rails & boning rods at every 100 mm whevere necessary as directed, removal of slumps and other deleterious matter, dressing of sides and levelling the bottom of trench to the extent required , utilising the available excavated earth locally for the work and all other appurtenances to complete in the following strata. Hard rock (blasting prohibited) Depth upto 1.50 m (vol-1 pwd SR 2021-22, P.11, SL No.1.21.5)			
3a	Considiring 20 percentage of EW qtyupto 1.5 mt depth	m^3	120.44	
3b	Considiring 30 percentage of EW qtyexceedng 1.5 mt depth but not exceeding 3 m	m^3	33.53	
4	Supplying S&S RCC SPUN / VIBRATED CAST PIPES (REINFORCED) pipes NP-3 Class conforming to IS:458-1988 with latest amentments using ordinary portland cement, for sanitary works and conveying to work site, rolling and lowering into trenches, laying true to line and level including loading and unloading at both destinations and jointing of pipes and specials, perfect linking of joints with jack to correct position including cost of jointing materials, i.e, rubber rings conforming to IS: 5382 for S&S RCC pipes, with all leads and lifts as directed and giving necessary hydraulic test as per ISS to the required pressure and commissioning etc. complete. (Contractor will make his own arrangements for procuring water for testing). Before the execution of the work, the contractor shall carry out the survey. (CSR 23-24 Vol - V, Sl.No: 16.3, Pg. No. 188) 400mm dia RCC Np3.	m	837.6	
5	Providing and laying Ductile Iron pipes of class conforming to IS 8329:2000 with latest amendments, conveying to work site, rolling and lowering into trenches, laying true to line, level and perfect linking at joints, testing and commissioning, including loading and unloading at both destinations, cutting of pipes wherever necessary, jointing with DI specials (excluding cost of specials) and rubber gaskets, cleaning the socket and spigot end with soap solution, applying soft soap to the socket and spigot ends before insertion of rubber gaskets, jacking and fixing in perfect conditions etc. The cost to include soap solution, soft soap, waste etc. and giving necessary hydraulic test to the required pressure as per ISS with all lead and lifts and cost of all jointing materials. (The contractor will make his own arrangements for water for testing. Earth work excavation in trenches to be measured and paid for seperately) Note: In sewerage projects for internal cement mortal lining (CML) of DI pipes, if High Alumina Cement (HAC) as recommended in Annexure B clause 16.3 of IS8329:2000 is considered in place of Slag or Sulphate Resistance Cement (SRC), the cost of pipes may	m	8	

	be increased by 5-6% from the prices listed. For DI K9 pipes. sl no4.1, pg no 51 ,Vol5			
6	Refilling available earth around trenches/pipelines, cables in layers not exceeding 20 cms in depth, compacting each deposited layer by ramming after watering with a lead upto 50 m, and lift upto 1.5 m. Including cost of all labour complete as per specifications (BWSSB SR 2023-24 VOL-I P.No.7, I.No. 1.1)	m^3	654.24	
7	Providing and constructing "WIRE CUT BRICK MACHINEHOLE CHAMBERS" using Portland/Pozzolana cement, conical in shape at top, with CC 1:3:6 foundation using 40mm and down size graded metal of approved quality and with an offset of 0.15M alround the chamber. Construct Brick masonry in CM 1:4, 340 mm thick, with wirecut bricks of approved quality, plaster inside and out side with CM 1:3, 12mm thick, except for the conical surface outside where the plaster thickness shall be 20mm. Slope inside to be 1:6 in the concrete towards central drain and finished smooth. Fixing of pipes in CC 1:2:4 with graded metal of 20mm and down size. Supplying and fixing SFRC Machinehole frame and cover (Heavy Duty) conforming to IS:12592 with latest amendment, in CC 1:2:4. Supplying and fixing footsteps made of 12mm dia. steel bars (Fe-500) with 3mm thick plastic encapsulation (IS-10910). The footsteps shall be fixed 30cms apart and on CC block embeded to masonry wall. The whole works include watering, curing, barricading, danger lighting, pouring tar over MH frame and cover, cost of tar, shoring, strutting, de watering, engraving Machinehole number with flow direction on the inner conical surface etc. as per the drawing etc. as per technical specifications and for the following diameters and depth etc. for 1.2mm diaCirc. B M.H: 1.2m dia BWSSB SR 2023-24 Vol-5 Page no 192 Item No16.15			
	1.00 mt depth manhole NMH 1,5,11,17,14,13,19	No	7.00	
	0.90 mt depth manhole NMH 2,12	No	2.00	
	0.80 mt depth manhole NMH 3, 4	No	2.00	
	1.10 mt depth manhole NMH 6,9,10,26,27	No	5.00	
	1.30 mt depth manhole NMH 7, 8	No	2.00	
	1.60 mt depth manhole NMH 15,20,22	No	3.00	
	0.50 mt depth manhole NMH 28,30	No	2.00	
	0.60 mt depth manhole NMH 31	No	1.00	
	0.40 mt depth manhole NMH 18	No	1.00	
	1.80 mt depth manhole NMH 21,32	No	2.00	
	1.40 mt depth manhole NMH 23,24	No	2.00	
	1.20 mt depth manhole NMH 25	No	1.00	
	0.30 mt depth manhole NMH 29	No	1.00	
	2.10 mt depth manhole NMH 33,37,38	No	3.00	
	2.50 mt depth manhole NMH 39	No	1.00	
	1.50 mt depth manhole NMH 16	No	1.00	
	1.90 mt depth manhole NMH 34	No	1.00	
	2.20 mt depth manhole NMH 35,36	No	2.00	
8	Providing and installing at site of work P.V.C. pipes including cost of pipes and specials and labour, including lowering into trenches, laying true to line, level and perfect linking at joints leak proof including jointing of approved type with all labour charges and all lift charges, handling charges including encasing the pipe around to a depth not less than 15 cms with gravel or selected earth available from the excavation etc. complete. PWD SR Vol-V Page no 139 Item no: 12.40			
	110mm(weight of pipe -1.315 kg)	m	130	
9	Supply and delivery at site special moulded variety PVC bend as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark with its latest amendments 110 mm dia PVC BEND (Page no118 Vol-5)	Each	130	
10	Supply and delivery at site special moulded variety PVC reducer as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark with its latest amendments 110 mm dia PVC REDUCER (Page no119 Vol-5)	Each	130	
11	Removal of unserviceable soil with disposal upto a suitable distance as directed by the engineer incharge of work. Vol 3 pgno 15	m^3	59.18	
12	Dewatering the sewage / storm water by using reqired 5 HP submersible pump for the diversion of storm / sewage during the execution of work. Considering for one Pump (Commom SR Vol 5 2023-24, P No: 201 I No 55.1) 5hp	Hr	30.00	
13	Conducting Topographical GIS survey for the proposed Water Supply / UGD scheme to the city / town with latest total station survey equipments. The work shall include collection of field data from local body, conducting detailed survey showing the all important land marks, existing water supply lines, sewer lines, all roads, levels, nature of roads, L-section survey for transmission main/ feeders/sub-feeder/ rising main from Jack well to WTP	m	890	

	and WTP to OHT's and distribution network inlcuding clearing the obstructions, with all survey staff required covering all the developed & newly developed layouts or L-section survey for Sub-Main/ Mains/Trunk Sewer/Rising main from wetwell to STP inlcuding clearing the obstructions, with all survey staff required covering all the developed & newly developed layouts with submission of Soft copy of drawings along with source file and Hard Copy in 3 sets for the following:. PWD SR Vol-5 Page no.194, item no:30			
14	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density. PWD SR Vol-3 Page no.24..	m^3	142.78	
15	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork shall be paid separately)Mix 1:3:6 Using 40 mm nominal size graded crushed coarse aggregates pg no 15 PWD vol 1sl no 2.1.3	m^3	66.65	
16	Providing and applying primer coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.70 kg/m2 using mechanical means BWSSB SR 2023-24 Page no-31 Vol-3, Item no-5.1	m^2	54.54	
17	Providing and laying Bituminous Concrete with 120 TPH capacity hot mix plant batch type using crushed aggregates of specified grading, premixed with bituminous binder VG-30 @ 5.2 per cent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects (Vol 3 SR forRoad& Bridges 2021-22, P No: 29 I No 5.14A)	m^3	2.73	
18	Providing and laying Bituminous Macadam with 120 tph capacity hot mix plant batch type using crushed aggregates of specified grading premixed with bituminous binder VG-30 @ 3.4% by weight of mix, transported to site, laid over a previously prepared surface with mechanical paver finisher to the required grade, level and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction (Vol 3 SR 2021-22, P No: 29 I No 5.8)	m^3	2.73	
19	Providing and applying tack coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.20 kg/m2 on the prepared bituminous surface cleaned with mechanical broom-Tack coat on Bituminous surface (Vol 3 SR 2021-22, P No: 29 Sl No 5.3)	m^2	54.54	

Executive Engineer

Water Supply & Sanitary division (East)-2,
BWSSB,HRBR 1st Block Kalyannagar,
Bangalore-560043